

**To:** Stephanie Vaughn/R2/USEPA/US@EPA[]  
**Cc:** "Kristen Durocher" [kristen.durocher@aecom.com]; kirchnersf@cdm.com"  
[kirchnersf@cdm.com]; Willard Potter" [otto@demaximis.com]  
**From:** "Robert Law"  
**Sent:** Thur 12/6/2012 6:42:17 PM  
**Subject:** Re: HV 10L samples

1. Yes
2. Answer forthcoming

>>> <Vaughn.Stephania@epamail.epa.gov> 12/6/2012 12:18 PM >>>  
Hi Rob,

Here are 2 comments/questions on the SOP:

1. Will one sample (consisting of 10 L ) be collected for both PCB congener and PCDD/F analysis?
2. In section Section 9.1.15, the option is draining into a vessel containing tetradecane for PCDD/F analysis or into 100 ml flask for PCB analysis. It is not clear how this step will be performed if both analysis (PCDD/F and PCB) will be performed. Please clarify.

I don't anticipate having any additional comments, either related to this email or the Comment 58 resolution email you sent on December 4th, but will let you know by the end of the week or Monday the latest if we do.

Thanks,  
Stephanie

From: "Robert Law" <rlaw@demaximis.com>  
To: "kirchnersf@cdm.com" <kirchnersf@cdm.com>, Stephanie Vaughn/R2/USEPA/US@EPA  
Cc: "Kristen Durocher" <kristen.durocher@aecom.com>, "Willard Potter" <otto@demaximis.com>  
Date: 11/28/2012 10:28 PM  
Subject: HV 10L samples

AECOM has consulted with their laboratories and other laboratories regarding EPA's request for 10L post-PUF aqueous sample analysis of PCBs and PCDD/Fs.

The SV CWCM program uses Analytical Perspectives (AP) for PCDD/Fs using a carbon SPE extraction of 1L samples. This can be scaled up by AP to 10L.

The PCBs are analyzed by TestAmerica (TA) using 1L extractions in a separatory funnel. This cannot be scaled up to 10L without additional method development.

Vista Analytical was consulted based on their involvement in the Tierra CSO program. The SOPs and MDLs developed for that program, using 5L (not 10L) samples, are proprietary and Vista would need to develop them for the HV QAPP using 10L samples.

There is no easy way to analyze PCBs in 10L aliquots. The 10L sample can be split and analyzed in 2L

subsamples. Larger volumes can be subject to continuous liquid-liquid extraction, but the chance for background PCB contamination becomes of utmost concern, potentially creating false positive results.

AP has a method using temperature assisted liquid extraction (TALEX). The SOP and detection limits (MDLs and EDLs) for both PCBs and PCDD/Fs are attached to this email. This TALEX method is beneficial for several reasons:

1. PCBs and PCDD/Fs can be analyzed from the same extraction
2. The constituents would be analyzed by AP, the same lab running the analyses for the solids and PUF samples.
3. It is more cost-effective than other methods.
4. It is a "closed" system which significantly reduces potential for background contamination.
5. SOPs, IDOC, and MDL data are currently available for all 2,3,7,8-PCDD/F isomers and 12 representative PCB congeners.
6. This technique has been successfully used by AP on other projects. It is not experimental.

AECOM has reviewed the MDLs and recommends using AP's TALEX is the best option for the CPG's 10L post PUF filtrate sample analysis of both PCDD/Fs and PCBs.

Robert Law, Ph.D.  
de maximis, inc.  
rlaw@demaximis.com  
Voice: 908-735-9315

Fax: 908-735-2132[attachment "Mega-TALEX IPR\_EDL Study.pdf.pdf" deleted by Stephanie Vaughn/R2/USEPA/US]  
[attachment "Mega-TALEX.pdf.pdf" deleted by Stephanie Vaughn/R2/USEPA/US]